

BBBBBBBBBBBB		000000000		000000000		TTTTTTTTTTTT		SSSSSSSSSS
BBBBBBBBBBBB		000000000		000000000		TTTTTTTTTTTT		SSSSSSSSSS
BBBBBBBBBBBB		000000000		000000000		TTTTTTTTTTTT		SSSSSSSSSS
BBB	BBB	000	000	000	000	TTT	SSS	
BBB	BBB	000	000	000	000	TTT	SSS	
BBB	BBB	000	000	000	000	TTT	SSS	
BBB	BBB	000	000	000	000	TTT	SSS	
BBB	BBB	000	000	000	000	TTT	SSS	
BBB	BBB	000	000	000	000	TTT	SSS	
BBB	BBB	000	000	000	000	TTT	SSS	
BBBBBBBBBBBB		000	000	000	000	TTT	SSS	SSSSSSSS
BBBBBBBBBBBB		000	000	000	000	TTT	SSS	SSSSSSSS
BBBBBBBBBBBB		000	000	000	000	TTT	SSS	SSSSSSSS
BBB	BBB	000	000	000	000	TTT	SSS	
BBB	BBB	000	000	000	000	TTT	SSS	
BBB	BBB	000	000	000	000	TTT	SSS	
BBB	BBB	000	000	000	000	TTT	SSS	
BBB	BBB	000	000	000	000	TTT	SSS	
BBB	BBB	000	000	000	000	TTT	SSS	
BBBBBBBBBBBB		000000000		000000000		TTT	SSS	SSSSSSSS
BBBBBBBBBBBB		000000000		000000000		TTT	SSS	SSSSSSSS
BBBBBBBBBBBB		000000000		000000000		TTT	SSS	SSSSSSSS

```

SSSSSSSS TTTTTTTTTT AAAAAA CCCCCCCC 000000 NN NN FFFFFFFF 111111 GGGGGGGG
SSSSSSSS TTTTTTTTTT AAAAAA CCCCCCCC 000000 NN NN FFFFFFFF 111111 GGGGGGGG
SS      TT      AA      AA      CC      00      00      NN      NN      FF      11      GG
SS      TT      AA      AA      CC      00      00      NN      NN      FF      11      GG
SS      TT      AA      AA      CC      00      00      NN      NN      FF      11      GG
SS      TT      AA      AA      CC      00      00      NN      NN      FF      11      GG
SSSSSS TT      AA      AA      CC      00      00      NN      NN      FFFFFFFF 11      GG
SSSSSS TT      AA      AA      CC      00      00      NN      NN      FFFFFFFF 11      GG
SS      TT      AAAAAAAAAA CC      00      00      NN      NN      FF      11      GG
SS      TT      AAAAAAAAAA CC      00      00      NN      NN      FF      11      GG
SS      TT      AA      AA      CC      00      00      NN      NN      FF      11      GG
SS      TT      AA      AA      CC      00      00      NN      NN      FF      11      GG
SS      TT      AA      AA      CC      00      00      NN      NN      FF      11      GG
SS      TT      AA      AA      CC      00      00      NN      NN      FF      11      GG
SSSSSSS TT      AA      AA      CCCCCCCC 000000 NN      NN      FF      111111 GGGGGG
SSSSSSS TT      AA      AA      CCCCCCCC 000000 NN      NN      FF      111111 GGGGGG

```

```

LL      111111 SSSSSSSS
LL      111111 SSSSSSSS
LL      11      SS
LL      11      SS
LL      11      SS
LL      11      SS
LL      11      SSSSSS
LL      11      SSSSSS
LL      11      SS
LL      11      SS
LL      11      SS
LL      11      SS
LL      11      SS
LLLLLLLLLL 111111 SSSSSSSS
LLLLLLLLLL 111111 SSSSSSSS

```

(2) 67  
(3) 99  
(4) 197

DECLARATIONS  
BOOSSTACONFIG - main program  
Dummy entry points

```
0000 1      .TITLE  STACONFIG - MAIN PROGRAM FOR STANDALONE CONFIGURE
0000 2      .IDENT  'V04-000'
0000 3
0000 4
0000 5 *****
0000 6
0000 7      COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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0000 11      THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED
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0000 17
0000 18      THE INFORMATION IN THIS SOFTWARE IS SUBJECT TO CHANGE WITHOUT NOTICE
0000 19      AND SHOULD NOT BE CONSTRUED AS A COMMITMENT BY DIGITAL EQUIPMENT
0000 20      CORPORATION.
0000 21
0000 22      DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS
0000 23      SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
0000 24
0000 25 *****
0000 26
0000 27
0000 28
0000 29 **
0000 30 FACILITY:      STANDALONE CONFIGURE
0000 31
0000 32 ABSTRACT:
0000 33      THIS ROUTINE IS THE MAIN PROGRAM AND SUBROUTINES FOR
0000 34      STANDALONE CONFIGURE. THIS PROCESS IS USED TO CONFIGURE ALL
0000 35      DISK AND PORT DRIVERS (CO-INCIDENTALLY, PAPER TAPE AS WELL) FROM
0000 36      SYSINIT. ALL MSCP- AND HSC-SERVED DEVICES ARE CONFIGURED AS WELL.
0000 37      IF A QUORUM DISK IS NEEDED.
0000 38
0000 39 ENVIRONMENT:  USER, EXEC, AND KERNEL MODE
0000 40
0000 41 AUTHOR:  MARYANN HINDEN,      CREATION DATE:  18-SEP-1979
0000 42      (ADAPTED FROM STASYSGEN)
0000 43
0000 44 MODIFIED BY:
0000 45
0000 46      V03-005 RSH0075      R. Scott Hanna  14-oct-1983
0000 47      Change the call to the ast routine AST_REC to cause
0000 48      it to execute in exec mode.
0000 49
0000 50      V03-004 RSH0073      R. Scott Hanna  10-Oct-1983
0000 51      Change the call to the ast routine AST_REC to cause
0000 52      it to execute in kernel mode.
0000 53
0000 54      V03-003 WMC0003      Wayne Cardoza   09-Aug-1983
0000 55      Put D devices back.
0000 56
0000 57      V03-002 WMC0002      Wayne Cardoza   05-Aug-1983
```



```

0000 58 :      Add lbr$output_help.
0000 59 :      Disable autoconfigure of D devices until this module is made
0000 60 :      to deal with noncontiguous drivers.
0000 61 :
0000 62 :
0000 63 :
0000 64 :
0000 65 :--

```

V03-001 WMC0001 Wayne Cardoza 01-Aug-1983  
Add BOO\$EXEOPEN, BOO\$FILCLOSE, BOO\$UFOOPEN, EXE\$LOAD\_CODE

```
0000 67 .SBTTL DECLARATIONS
0000 68 :
0000 69 : INCLUDE FILES:
0000 70 :
0000 71 $CLUBDEF ; Define cluster symbols
0000 72 :
0000 73 :
0000 74 : MACROS:
0000 75 :
0000 76 :
0000 77 :
0000 78 : EQUATED SYMBOLS:
0000 79 :
0000 80 :
0000 81 :
0000 82 : OWN STORAGE:
0000 83 :
0000 84 :
00000000 85 .PSECT BOO$SYSGEN,WRT
0000 86 :
00000000 87 BOO$GL_CMDOPT:: .LONG 0 ; Options longword
0004 88 :
0004 89 SELECT_LIST: ; Select list for AUTOCONFIGURE ALL
44 00' 0004 90 .ASCIC /D/ ; All disks
01 0004 :
50 00' 0006 91 .ASCIC /P/ ; All port drivers (and paper tape!)
01 0006 :
00 0008 92 .BYTE 0 ; End of list
0009 93 :
30 3A 30 30 20 30 00000011'010E0000' 0009 94 ASCII_TIME: .ASCID /0 00:00:05.00/
30 30 2E 35 30 3A 30 0017 :
00000026 001E 95 BIN TIME: .BLKQ 1
20 20 20 20 20 20 20 20 20 20 0026 96 BLANKS: .ASCII / ; 16 blanks
20 20 20 20 0032 :
0036 97 :
```

```
0036 99 .SBTTL BOO$STACONFIG - main program
0036 100 :++
0036 101 : FUNCTIONAL DESCRIPTION:
0036 102 : This is the main program for standalone CONFIGURE. It does the
0036 103 : following:
0036 104 :
0036 105 : 1) Locks the entire image into the working set.
0036 106 : 2) Autoconfigures disks and port devices.
0036 107 : 3) If we are not using a quorum disk in order to
0036 108 : form a cluster, the image exits.
0036 109 : 4) Sets a timer. Every 5 seconds, a check is made
0036 110 : to see if we are in a cluster yet. If so, we
0036 111 : exit; else we reset the timer.
0036 112 : 5) Call BOO$CONFIGURE, which will configure all MSCP-
0036 113 : and HSC-served devices. At some point the disk which
0036 114 : is needed to form the cluster will be configured, the
0036 115 : cluster will form, and the image will exit.
0036 116 :
0036 117 : Note that no determination is made about which specific disk is to
0036 118 : be the quorum disk - they are simply all configured.
0036 119 :
0036 120 : CALLING SEQUENCE:
0036 121 :
0036 122 : Called by SYSINIT (via the image activator)
0036 123 :
0036 124 : INPUT PARAMETERS:
0036 125 :
0036 126 : NONE
0036 127 :
0036 128 : OUTPUT PARAMETERS:
0036 129 :
0036 130 : NONE
0036 131 :
0036 132 : ERROR INDICATIONS:
0036 133 :
0036 134 : Various errors printed on the system console
0036 135 :
0036 136 : --
000C 0036 137 :
0036 138 : .ENTRY BOO$STACONFIG,^M<R2,R3>
0038 139 : $LKWSET S - ; Lock entire image in working set
0038 140 : INADR=BOO$G0_LIMITS, - ;
0038 141 : RETADR=BOO$G0_RETADR ;
004D 142 :
004D 143 :
004D 144 : Get current values for local copy of SYSPARAM
004D 145 :
00000000'EF 00 FB 004D 146 : CALLS #0,BOO$USEACT
0054 147 :
0054 148 :
0054 149 : Autoconfigure disks and port devices.
0054 150 :
0054 151 : MOVAB SELECT_LIST,BOO$GL_SELECT ; Use builtin select list
00000000'EF AD AF 9E 0054 152 : CALLS #0,BOO$CONFIGALL ; Autoconfigure all adapters
00000000'EF 00 FB 005C 153 :
0063 154 :
0063 155 : If the quorum disk system parameter is non-blank, then we configure
```



```
0063 156 ; all "served" devices in case one of them is the quorum disk; else
0063 157 ; the image exits.
0063 158 ;
BA AF 00000000'GF 10 29 0063 159 CMPC3 #4*4,G^CLUSGB_QDISK,BLANKS
23 13 006C 160 BEQL 10$
006E 161
006E 162 ;
006E 163 ; Get binary equivalent of 5 seconds to set timer.
006E 164 ;
006E 165 $BINTIM_S timbuf = ASCII_TIME,-
006E 166 $CMEXEC_S timadr = BIN_TIME
007B 167 AST_REC ; Check if we are a cluster member
008A 168
008A 169 ;
008A 170 ; Start threads which will configure MSCP- and HSC-served disks.
008A 171 ;
00000000'EF 00 FB 008A 172 CALLS #0,BOO$CONFIGURE
04 0091 173
0091 174 10$: RET
0092 175
0004 0092 176 AST_REC: .WORD ^M<R2>
0094 177
52 00000000'GF D0 0094 178 MOVL G^CLUSGL CLUB,R2 ; Get cluster info block
00 00 009B 179 BBC #CLUB$V CLUSTER,- ; Br if we are not a cluster member
OA 1C A2 009D 180 CLUB$L_FLAGS(R2),10$
00A0 181
00A0 182 ;
00A0 183 ; Cluster has been formed - exit
00A0 184 ;
04 00A9 185 $EXIT_S
00AA 186 RET
00AA 187
00AA 188 ;
00AA 189 ; Cluster not yet formed
00AA 190 ;
00AA 191 10$: $SETIMR_S efn = #3,- ; Reset timer
00AA 192 daytim = BIN_TIME,-
00AA 193 astadr = AST_REC
04 00BC 194 RET ; Dismiss AST
00BD 195
```



```

00BD 197      .SBTTL  Dummy entry points
00BD 198
00BD 199 :
00BD 200 : These entry points are need to resolve references to routines
00BD 201 : not linked with the standalone version of CONFIG.
00BD 202 :
00BD 203
00BD 204 EXESLOAD CODE::
00BD 205 LBR$OUTPUT HELP::
50 0000 00BD 206      .WORD 0      ; ENTRY MASK
    D4 00BF 207      CLRL R0
    04 00C1 208      RET
    00C2 209
    00C2 210 BOOSREADFILE::
    00C2 211 BOOSFILCLOSE::
    00C2 212 BOOSUFOOPEN::
50 00C2 213 BOOSEXEOPEN::
    D4 00C2 214      CLRL R0
    05 00C4 215      RSB
    00C5 216
    00C5 217
    00C5 218      .END  BOO$STACONFIG
  
```

STACONFIG  
Symbol table

- MAIN PROGRAM FOR STANDALONE CONFIGURE

16-SEP-1984 00:03:36  
4-SEP-1984 23:06:06

VAX/VMS Macro V04-00  
[BOOTS.SRC]STACONFIG.MAR;1

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(4)

```

$ST1      = 00000000
ASCII TIME 00000009 R 02
AST_REC    00000092 R 02
BIN_TIME   0000001E R 02
BLANKS     00000026 R 02
BOOS$CONFIGALL ***** X 02
BOOS$CONFIGURE ***** X 02
BOOS$EXEOPEN 000000C2 RG 02
BOOS$FILCLOSE 000000C2 RG 02
BOOS$GL_CMDOPT 00000000 RG 02
BOOS$GL_SELECT ***** X 02
BOOS$GQ_LIMITS ***** X 02
BOOS$GQ_RETADR ***** X 02
BOOS$READFILE 000000C2 RG 02
BOOS$STACONFIG 00000036 RG 02
BOOS$UFOOPEN 000000C2 RG 02
BOOS$USEACT ***** X 02
CLUS$GB_QDISK ***** X 02
CLUS$GL_CLUB ***** X 02
CLUS$SL_FLAGS = 0000001C
CLUS$V_CLUSTER = 00000000
EXES$LOAD CODE 000000BD RG 02
LBR$OUTPUT_HELP 000000BD RG 02
SELECT_LIST 00000004 R 02
SYSS$BINTIM ***** GX 02
SYSS$CMEXEC ***** GX 02
SYSS$EXIT ***** GX 02
SYSS$LKWSET ***** GX 02
SYSS$SETIMR ***** GX 02

```

-----  
! Psect synopsis !  
-----

PSECT name	Allocation	PSECT No.	Attributes
. ABS .	00000000 ( 0.)	00 ( 0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
\$ABSS	00000000 ( 0.)	01 ( 1.)	NOPIC USR CON ABS LCL NOSHR EXE RD WRT NOVEC BYTE
BOOS\$SYSGEN	000000C5 ( 197.)	02 ( 2.)	NOPIC USR CON REL LCL NOSHR EXE RD WRT NOVEC BYTE

-----  
! Performance indicators !  
-----

Phase	Page faults	CPU Time	Elapsed Time
Initialization	37	00:00:00.09	00:00:00.26
Command processing	142	00:00:00.71	00:00:04.12
Pass 1	164	00:00:02.46	00:00:07.24
Symbol table sort	0	00:00:00.21	00:00:00.26
Pass 2	54	00:00:00.64	00:00:01.59
Symbol table output	5	00:00:00.04	00:00:00.27
Psect synopsis output	0	00:00:00.02	00:00:00.03
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	404	00:00:04.17	00:00:13.77

The working set limit was 1200 pages.

11071 bytes (22 pages) of virtual memory were used to buffer the intermediate code.  
There were 20 pages of symbol table space allocated to hold 184 non-local and 2 local symbols.  
218 source lines were read in Pass 1, producing 16 object records in Pass 2.  
16 pages of virtual memory were used to define 15 macros.

-----  
! Macro library statistics !  
-----

Macro library name	Macros defined
-----	-----
\$255\$DUA28:[BOOTS.OBJ]BOOTS.MLB;1	0
\$255\$DUA28:[SYS.OBJ]LIB.MLB;1	1
\$255\$DUA28:[SYSLIB]STARLET.MLB;2	11
TOTALS (all libraries)	12

281 GETS were required to define 12 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS\$:STACONFIG/OBJ=OBJ\$:STACONFIG MSRC\$:STACONFIG/UPDATE=(ENH\$:STACONFIG)+EXECML\$/LIB+LIB\$:BOOTS.MLB/LIB



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